

WO 00/53000

PCT/AU00/00181

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SEQUENCE LISTING

<110> Commonwealth Scientific and Industrial Research Organisation

<120> Plants and feed baits for controlling damage from
feeding insects

<160> 18

<170> PatentIn Ver. 2.1

<210> 1

<211> 5

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: conserved
sequence of fusolin proteins

<400> 1

Val Arg Trp Gln Arg
1 5

<210> 2

<211> 13

<212> PRT

<213> Dermolepida albobirtum entomopoxvirus, and Melolontha melolontha
entomopoxvirus

<400> 2

His Gly Tyr Ile Thr Phe Pro Ile Ala Arg Gln Arg Arg
1 5 10

<210> 3

<211> 13

<212> PRT

<213> Anomala cuprea entomopoxvirus

<400> 3

His Gly Tyr Val Thr Phe Pro Ile Ala Arg Gln Arg Arg
1 5 10

<210> 4

<211> 13

<212> PRT

<213> Choristoneura biennis entomopoxvirus, Helicoverpa armigera entomopoxvirus,
and Pseudaletia separata entomopoxvirus

<400> 4

His Gly Tyr Met Thr Phe Pro Ile Ala Arg Gln Arg Arg
1 5 10

<210> 5

<211> 13

<212> PRT

<213> Bombyx mori nuclear polyhedrosis virus

<400> 5

His Gly Tyr Leu Ser Leu Pro Thr Ala Arg Gln Tyr Lys
1 5 10

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<210> 6
 <211> 13
 <212> PRT
 <213> Choristoneura fumiferana nuclear polyhedrosis virus

<400> 6
 His Gly Tyr Leu Ser Val Pro Val Ala Arg Gln Tyr Lys
 1 5 10

<210> 7
 <211> 13
 <212> PRT
 <213> Mamestra brassica nuclear polyhedrosis virus

<400> 7
 His Gly Tyr Leu Ser Tyr Pro Val Ala Arg Gln Tyr Lys
 1 5 10

<210> 8
 <211> 13
 <212> PRT
 <213> Xestria c-nigrum GV

<400> 8
 His Gly Phe Met Leu Tyr Pro Leu Ala Arg Gln Tyr Arg
 1 5 10

<210> 9
 <211> 26
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: PCR primer

<400> 9
 cayggwtata ttcantttcc tatagc

26

<210> 10
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: PCR primer

<400> 10
 acartttrtar aawccttcwc cyac

24

<210> 11
 <211> 220
 <212> PRT
 <213> Dermolepida albohirtum entomopoxvirus

<400> 11
 His Gly Tyr Ile Thr Phe Pro Ile Ala Arg Gln Arg Arg Cys Asn Val
 1 5 10 15

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Gln Gly Gly Phe Trp Trp Pro Thr Asp Gly Ser Ala Ile Pro Asp Pro
20 25 30

Met Cys Arg Ala Ala Tyr Gln Asn Val Phe Asn Thr Val Leu Gln Gln
35 40 45

Gly Gly Ser Leu Asn Gln Ala Ala Thr Ala Ala Gln Tyr Met Phe Gln
50 55 60

Gln Asp Asn Glu Tyr Ala Ala Leu Ala Gly Ser Asn Phe Arg Asp Leu
65 70 75 80

Asn His Ile Gln Asn Asn Val Val Pro Phe Asp Leu Cys Ala Ala Gly
85 90 95

Ala Asn Asn Trp Arg Arg Val Pro Phe Gly Asp Lys Ser Gly Met Asp
100 105 110

Ile Ser Gly Ser Trp Thr Pro Thr Gly Ile Pro Leu Glu Ser Asn Thr
115 120 125

Val Gly Thr Gly Pro Ile Glu Phe Glu Phe Cys Pro Thr Ala Ile His
130 135 140

Glu Pro Ser Phe Phe Glu Ile Tyr Ile Thr Val Pro Asn Phe Asn Val
145 150 155 160

Phe Thr Asp Gln Val Thr Trp Ser Gln Leu Glu Asn Ile Phe Thr Gly
165 170 175

Pro Ile Pro Leu Val Ala Arg Arg Pro Asp Ser Leu Cys Asn Ala Asn
180 185 190

S r Arg Val Tyr Arg Ile Thr Val Gly Ile Pro Met Arg Gln Thr Gln
195 200 205

Phe Val Leu Tyr Val Arg Trp Gln Arg Ile Asp Pro
210 215 220

<210> 12

<211> 220

<212> PRT

<213> Melolontha melolontha entomopoxvirus

<400> 12

His Gly Tyr Ile Thr Phe Pro Ile Ala Arg Gln Arg Arg Cys Asn Val
1 5 10 15

Gln Gly Gly Phe Trp Trp Pro Pro Gly Gly Ser Gly Ile Pro Asp Pro
20 25 30

Met Cys Arg Ala Ala Tyr Gln Asn Val Tyr Asn Lys Val Leu Gln Gln
35 40 45

Gly Gly Thr Ile Asp Gln Ala Ala Ser Ala Ala Gln Tyr Met Phe Gln
50 55 60

Gln Asp Asn Glu Tyr Ala Ala Leu Ala Gly Pro Asn Tyr Leu Asp Gln
65 70 75 80

Asn His Ile Arg Asn Asn Val Val Pr Asn Tyr Leu Cys Ala Ala His
85 90 95

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Ala Thr Thr Trp Arg Ile Arg Pro Phe Gly Asp Lys Thr Gly Met Asp
 100 105 110

Val Ser Gly Ser Trp Thr Pro Thr Val Ile Pro Leu Gln Asp Asn Thr
 115 120 125

Val Ser Thr Val Pro Ile Glu Phe Glu Phe Cys Pro Thr Ala Ile His
 130 135 140

Glu Pro Ser Phe Phe Glu Ile Tyr Ile Thr Val Pro Ser Phe Asn Val
 145 150 155 160

Tyr Thr Asp Gln Val Thr Trp Gln Gln Leu Ile Asn Ile Phe Thr Gly
 165 170 175

Pro Ile Pro Leu Val Gln Arg Arg Pro Asp Ser Gln Cys Asn Ala His
 180 185 190

Asn Leu Val Tyr Arg Thr Thr Val Gly Ile Pro Val Arg Gln Thr Gln
 195 200 205

Phe Val Leu Tyr Val Arg Trp Gln Arg Asn Asp Pro
 210 215 220

<210> 13
 <211> 220
 <212> PRT
 <213> Anomala cuprea entomopoxvirus

<400> 13
 His Gly Tyr Val Thr Phe Pro Ile Ala Arg Gln Arg Arg Cys Asn Val
 1 5 10 15

Gln Gly Gly Phe Trp Trp Pro Pro Glu Gly Thr Asn Ile Pro Asp Pro
 20 25 30

Met Cys Arg Ala Ala Tyr Gln Tyr Val Phe Asn Lys Val Leu Ser Glu
 35 40 45

Gly Gly Ser Thr Ser Gln Ala Ala Ser Ala Ala Gln Tyr Met Phe Gln
 50 55 60

Gln Asp Asn Glu Tyr Ala Ala Leu Ala Gly Pro Asn Phe Arg Asp Ile
 65 70 75 80

Cys Trp Ile Lys Glu Gln Val Val Pro Asp Tyr Leu Cys Ala Ala Gly
 85 90 95

Ala Asp Thr Trp Arg Ile Arg Pro Phe Gly Asp Lys Thr Gly Met Asp
 100 105 110

Ile Val Gly Ser Trp Pro Pro Thr Val Ile Pro Leu Glu Asn Asn Phe
 115 120 125

Val Asn Thr Ile Pro Ile Glu Leu Glu Phe Cys Pro Thr Ala Ile His
 130 135 140

Glu Pro Ser Tyr Phe Glu Val Tyr Val Thr Thr Pro Glu Phe Asn Val
 145 150 155 160

Tyr Arg Asp Lys Val Thr Trp Pro Leu Leu Glu Leu Val Phe Asn Ser
 165 170 175

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Thr Val Pro Leu Val Asn Arg Arg Ala Asp Ser Leu Cys Thr Ala Asn
 180 185 190

Ala Arg Val Tyr Arg Met Ile Val Pro Val Pro Tyr Arg Gln Thr Gln
 195 200 205

Phe Val Ile Tyr Val Arg Trp Gln Arg Ile Asp Pro
 210 215 220

<210> 14
 <211> 221
 <212> PRT
 <213> Choristoneura biennis entomopoxvirus

<400> 14
 His Gly Tyr Met Thr Phe Pro Ile Ala Arg Gln Arg Arg Cys Ser Ala
 1 5 10 15

Ala Gly Gly Asn Trp Tyr Pro Val Gly Gly Gly Gly Ile Gln Asp Pro
 20 25 30

Met Cys Arg Ala Ala Tyr Gln Asn Val Phe Asn Lys Val Leu Asn Ser
 35 40 45

Asn Gly Gly Asp Val Ile Asp Ala Ser Glu Ala Ala Asn Tyr Met Tyr
 50 55 60

Thr Gln Asp Asn Glu Tyr Ala Ala Leu Ala Gly Pro Asp Tyr Thr Asn
 65 70 75 80

Ile Cys His Ile Gln Gln Arg Val Val Pro Ser Tyr Leu Cys Ala Ala
 85 90 95

Gly Ala Ser Asp Trp Ser Ile Arg Pro Phe Gly Asp Lys Ser Gly Met
 100 105 110

Asp Leu Pro Gly Ser Trp Thr Pro Thr Ile Ile Gln Leu Ser Asp Asn
 115 120 125

Gln Gln Ser Asn Val Val Met Glu Leu Glu Phe Cys Pro Thr Ala Val
 130 135 140

His Asp Pro Ser Tyr Tyr Glu Val Tyr Ile Thr Asn Pro Ser Phe Asn
 145 150 155 160

Val Tyr Thr Asp Asn Val Val Trp Ala Asn Leu Asp Leu Ile Tyr Asn
 165 170 175

Asn Thr Val Thr Leu Arg Pro Lys Leu Pro Glu Ser Thr Cys Ala Ala
 180 185 190

Asn Ser Met Val Tyr Arg Phe Glu Val Ser Ile Pro Val Arg Pro Ser
 195 200 205

Gln Phe Val Leu Tyr Val Arg Trp Gln Arg Ile Asp Pro
 210 215 220

<210> 15
 <211> 220
 <212> PRT
 <213> Helicoverpa armigera entomopoxvirus

<400> 15

His Gly Tyr Met Thr Phe Pro Ile Ala 6/8 Arg Gln Arg Arg Cys Ser Val
 1 5 10 15
 Arg Gly Gly Gln Trp Trp Pro Pro Asn Gly Asp Gly Ile Thr Asp Thr
 20 25 30
 Met Cys Arg Ala Ala Tyr Gln Asn Val Tyr Asn Lys Val Leu Asn Gln
 35 40 45
 Tyr Asn Asp Pro Gln Glu Ala Ala Thr Ala Ala Gln Tyr Met Phe Gln
 50 55 60
 Gln Asp Asn Glu Tyr Ala Ala Leu Ala Gly Pro Asp Tyr Thr Asn Leu
 65 70 75 80
 Cys Asn Leu Gln Gln Asn Val Val Pro Asn Asn Leu Cys Ala Ala Gly
 85 90 95
 Ala Asp Asp Trp Asp Val Val Pro Phe Gly Asp Lys Ser Gly Met Asp
 100 105 110
 Leu Pro Gly Asn Trp Val Pro Thr Val Ile Pro Leu Asp Ser Asn His
 115 120 125
 Gln Ser Ser Val Ala Leu Glu Leu Glu Phe Cys Pro Thr Ala Val His
 130 135 140
 Asp Pro Ser Tyr Tyr Glu Val Tyr Ile Thr Asn Ser Gly Phe Asn Val
 145 150 155 160
 His Thr Asp Asn Val Val Trp Gly Asn Leu Glu Leu Ile Phe Asn Asp
 165 170 175
 Thr Val Pro Leu Arg Pro Lys Ser Ser Thr Ser Thr Cys Asn Ala Asn
 180 185 190
 Pro Asn Val Tyr Arg Phe Thr Val Ser Ile Pro Val Arg Pro Ala Gln
 195 200 205
 Phe Val Leu Tyr Val Arg Trp Gln Arg Ile Asp Pro
 210 215 220

<210> 16

<211> 217

<212> PRT

<213> Bombyx mori nuclear polyhedrosis virus

<400> 16

His Gly Tyr Leu Ser Leu Pro Thr Ala Arg Gln Tyr Lys Cys Phe Lys
 1 5 10 15
 Gly Gly Asn Phe Tyr Trp Pro His Asn Gly Asp Lys Ile Pro Asp Ala
 20 25 30
 Ala Cys Arg Asn Ala Tyr Lys Ser Val Tyr Tyr Lys Tyr Arg Ala Leu
 35 40 45
 Asp Leu Glu Ser Gly Ala Ala Ala Ala Thr Ala Gln Tyr Met Phe Gln
 50 55 60
 Gln Tyr Met Glu Tyr Ala Ser Val Ala Gly Pro Asn Tyr Asp Asp Phe
 65 70 75 80

[illegible]

<213> Choristoneura fumiferana nuclear polyhedrosis virus

His	Gly	Tyr	Leu	Ser	Val	Pro	Val	Ala	Arg	Gln	Tyr	Lys	Cys	Phe	Arg
1				5					10					15	
Asp	Gly	Asn	Phe	Trp	Trp	Pro	Asn	Asn	Gly	Asp	Asn	Ile	Pro	Asp	Glu
			20					25					30		
Ala	Cys	Arg	Asn	Ala	Tyr	Lys	Lys	Val	Tyr	Tyr	Lys	Tyr	Arg	Ala	Ile
		35					40					45			
Asn	Val	Pro	Ser	Gln	Glu	Ala	Ala	Ser	Ala	Ala	Gln	Tyr	Met	Phe	Gln
	50					55					60				
Gln	Tyr	Thr	Glu	Tyr	Ala	Ala	Leu	Ala	Gly	Pro	Asn	Tyr	Leu	Asp	Phe
65					70					75					80
Asp	Met	Val	Lys	Arg	Asp	Val	Val	Pro	His	Thr	Leu	Cys	Gly	Ala	Ala
				85					90					95	
Ser	Asn	Asp	Arg	Ala	Ala	Leu	Phe	Gly	Asp	Lys	Ser	Gly	Met	Asp	Glu
			100					105					110		
Pro	Phe	Tyr	Asn	Trp	Arg	Pro	Asp	Val	Leu	Tyr	Met	Asn	Arg	Tyr	Gln
		115					120					125			
Asn	Ser	Tyr	Pro	Met	Asp	Val	His	Phe	Cys	Pro	Thr	Ala	Ile	His	Glu
	130					135					140				
Pro	Ser	Tyr	Phe	Glu	Val	Phe	Val	Thr	Lys	Ser	Thr	Trp	Asp	Arg	Arg
145					150					155					160

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Asn Pro Ile Thr Trp Asn Glu Leu Glu Tyr Ile Gly Gly Asn Asn Ser
 165 170 175

Gly Leu Val Pro Asn Pro Gly Asp Pro Leu Cys Asp Ser Asn Gln Ile
 180 185 190

Tyr Ser Ile Pro Val Ser Val Pro Tyr Arg Ser Gly Gln Phe Val Met
 195 200 205

Tyr Val Arg Trp Gln Arg Ile Asp Pro
 210 215

<210> 18
 <211> 207
 <212> PRT
 <213> Xestria c-nigrum GV

<400> 18
 His Gly Phe Met Leu Tyr Pro Leu Ala Arg Gln Tyr Arg Cys Tyr Ala
 1 5 10 15

Pro Gln Asp Phe Tyr Trp Pro Asp Asp Gly Ser Asn Ile Gln Asn Pro
 20 25 30

Ala Cys Lys Leu Ala Phe Gln His Val Tyr Arg Asn Ser Gly Ser Ala
 35 40 45

Ala Ala Gln Tyr Met Phe Val Gln Tyr Ala Glu Tyr Ala Ala Leu Ala
 50 55 60

Gly Ser Asn Tyr Asn Asp Met Gln His Ile Gln Gln Asp Val Val Pro
 65 70 75 80

Asn Phe Leu Cys Ser Ala Ala Ala Asp Asn Thr Ser Thr Pro Tyr Gly
 85 90 95

Asp Lys Ser Gly Ile Ser Leu Pro Ser Asp His Trp Gln Thr Thr Ile
 100 105 110

Ile Asn Asp Arg Gly His Thr Gln Leu Tyr Tyr Cys Pro Thr Val Pro
 115 120 125

His Asp Pro Ser Phe Phe Gln Val Phe Val Thr Lys Lys Asp Phe Asp
 130 135 140

Val Gly Thr Thr Ile Val Thr Trp Asn Asp Leu Glu Leu Val His Glu
 145 150 155 160

Gln Ser Ala Val Ile Val Pro Asn Ser Arg Thr Val Pro Asn Ser Glu
 165 170 175

Glu Cys Gly Ala Phe Val Tyr Ser Ile Asp Ala Thr Leu Pro Met Arg
 180 185 190

Ser Lys Pro Phe Val Val Phe Val Arg Trp Gln Arg Glu Asp Pro
 195 200 205